

MINUTES
**BOARD OF BUILDING STANDARDS/
ARCHITECTURAL BOARD OF REVIEW/SIGN REVIEW**
FEBRUARY 11, 2016
5:30 P.M.
LAKWOOD CITY HALL
COUNCIL CONFERENCE ROOM

1. Roll Call

Bryan Evans, Vice Chairman
Amy Haney
Daniel Musson
David Robar, Chairman
Cynthia Stockman

Jason Russell, Planning and Development
Michael Molinski, City Architect
Jennifer Swallow, Chief Assistant Law Director

2. Approve the minutes of the January 14, 2016 meeting.

A motion was made by Mr. Robar, seconded by Mr. Evans to **APPROVE** the minutes of the January 14, 2016 meeting. All of the members voting yea, the motion passed.

3. Opening Remarks

Because the location of the meeting had been moved to the smaller Council Conference room, Mr. Russell advised the participants as to the the location of the oath sheet.

Mr. Robar read the following to the public prior to start of business:

Applicants and anyone wanting to make a statement are asked to come to the table, print and sign your name on the oath sheet and slowly and clearly state your name and address. If you have a business card, please give one to the secretary. Anyone else wishing to address the board is asked to follow the same procedure.

Item 13 was Summary Approved at the pre-review meeting on February 4, 2016.

**SUMMARY APPROVED
SIGN REVIEW**

13. **Docket No. 02-19-16**

**15016 Detroit Avenue
Sprint Mobile Center**

- () Approve
- () Deny
- () Defer

Annlouise Delgado
Blink Signs
1925 St. Claire Avenue, NE
Cleveland, Ohio 44114

The applicant requests the review and approval of a custom blade sign. (Page 70)

A motion was made by Mr. Evans, seconded by Mr. Robar to **APPROVE** the Summary Approved. All of the members voting yea, the motion passed.

**APPEAL - REQUEST FOR REHEARING
BOARD OF BUILDING STANDARDS**

6. **Docket No. 12-130-15** **R** **13926 Clifton Boulevard**

() Approve Heather Rudge
() Deny 13926 Clifton Boulevard
() Defer Lakewood, Ohio 44107

The applicant requests the rehearing for an appeal to a variance request denied at the meeting in January; the variance was for garage that was constructed outside of the Boards of approved plan. (Page 13)

Mr. Russell advised the Board that the application had been **withdrawn administratively** as new information and survey were provided to the Division of Housing and Building negating the need for a variance.. No further action was required.

REHEARING

7. **Docket No. 12-130-15** **R** **13926 Clifton Boulevard**

() Approve Heather Rudge
() Deny 13926 Clifton Boulevard
() Defer Lakewood, Ohio 44107

The applicant requests the review and approval of an appeal to a variance request denied at the meeting in January; the variance was for garage that was constructed outside of the Boards of approved plan. (Page 13)

No action was required.

NEW BUSINESS

APPEAL

BOARD OF BUILDING STANDARDS

8. **Docket No. 02-14-16** **R** **2151 Atkins Avenue**

() Approve Mark Czarnecki
() Deny 2153 Atkins Avenue, Up
() Defer Lakewood, Ohio 44107

The applicant requests the review and approval of an appeal to the Clean Water Pilot Program; the applicant is appealing the decision by the City that a sump pump is required to alleviate misconnection. (Page 25)

Mr. Russell advised the Board the applicant requested a deferral.

A motion was made by Mr. Evans, seconded by Mr. Musson to **DEFER** the request **until the meeting of March 10, 2016**. All of the members voting yea, the motion passed.

9. **Docket No. 02-15-16** **R** **2143-45 Atkins Avenue**

() Approve John Czarnecki
() Deny 9900 Dublin Drive
() Defer North Royalton, Ohio 44133

The applicant requests the review and approval of an appeal to the Clean Water Pilot Program; the applicant is appealing the decision by the City that a sump pump is required to alleviate misconnection. (Page 28)

Mr. Russell advised the Board the applicant requested a deferral.

A motion was made by Mr. Evans, seconded by Mr. Musson to **DEFER** the request **until the meeting of March 10, 2016**. All of the members voting yea, the motion passed.

OLD BUSINESS
ARCHITECTURAL BOARD OF REVIEW
REQUEST FOR MODIFICATIONS

4. **Docket No. 12-119-14** **C** **1470 Victoria Avenue**
Grant Elementary School

<input type="checkbox"/> Approve	Rodwell G. King
<input type="checkbox"/> Deny	GPD Group
<input type="checkbox"/> Defer	520 S. Main Street, Suite 2531 Akron, Ohio 44311

The applicant requests the review and approval of a new two-story 56,167 square foot elementary school; item was approved at the January 8, 2015 special meeting and the May 14, 2015 meeting for modifications. This request was deferred from the meetings in December and January. (Page 4)

Rodwell King, GPD Group, applicant was present to explain the request.

After much discussion, the Board wanted no change of material for the canopy but was willing to concede to shingles for the roof. Mr. King said the school board would forgo the construction of any canopy because of the high cost of the polycarbonate product.

Public comment was closed. Mr. Russell said the city would allow shingles on the roof but remained adamant about the preference for the original polycarbonate design/roofing. Mr. Molinski agreed with Mr. Russell.

Mr. Robar made a motion to DENY the change to the canopy and APPROVE shingles for the roof. Advised by Mr. Russell to the proper wording, Mr. Robar withdrew his motion.

A motion was made by Mr. Robar, seconded by Mr. Evans to **APPROVE** the use of shingles for the roof **with the following stipulation:**

- **there would be no change of material for the canopy.**

All of the members voting yea, the motion passed.

OLD BUSINESS
5. **Docket No. 01-05-16** **C** **1327 Bonnieview Avenue**
Oak Tree Apartments

<input type="checkbox"/> Approve	Timothy Isoniemi
<input type="checkbox"/> Deny	AIY Properties, Inc.
<input type="checkbox"/> Defer	2 Summit Park Dr., Suite 645 Independence, Ohio 44131

The board was in favor of the proposal. Discussion ensued about the fencing and future approvals: patio, stain glass window replacements, signage, etc. Mr. Molinski asked if the copper was real, coated copper. Mr. Ernst replied that was his preference.

A motion was made Mr. Robar, seconded by Ms. Stockman to **APPROVE** the request with the following stipulations:

- **Fencing was provided for the neighboring properties, and**
- **The windows, doors, and signage would be heard at a future meeting.**

All of the members voting yea, the motion passed.

NEW BUSINESS

ARCHITECTURAL BOARD OF REVIEW

10. **Docket No. 02-16-16** R **2115 Dowd Avenue**

- Approve
- Deny
- Defer

Richard Bovaro
RDB Realty Inc.
1272 Surfside Court
Aurora, Ohio 44202

The applicant requests the review and approval for the replacement of front steps and landing. (Page 31)

Neither the applicant nor representative was present. Mr. Russell had spoken with the applicant and asked the Board to defer the item.

A motion was made by Mr. Robar, seconded by Mr. Evans to **DEFER** the request **until the meeting of March 10, 2016**. All of the members voting yea, the motion passed.

COMMUNICATION

14. **Docket No. 02-20-16** **Communication about the Repeal of Existing Water Control Specifications Approved by the Board of Building Standards**

- Approve
- Deny
- Defer

Jason Russell
City of Lakewood
12650 Detroit Avenue
Lakewood, Ohio 44107

The Division of Housing and Building is proposing to repeal existing water controlling specifications that were previously approved by the Board of Building Standards in the 1980s. These specifications have not been updated to keep pace with waterproofing/water controlling methods which creates additional burden to homeowners and contractors. (Page 74)

Mr. Russell presented the communication.

There were no comments or questions from the Board other than to state for the record that to the repeal existing water controlling specifications made sense. Public comment was closed.

A motion was made by Mr. Robar, seconded by Mr. Evans to **ACCEPT** the request as presented. All of the members voting yea, the motion passed.

ADJOURN

A motion was made by Mr. Robar, seconded by Mr. Musson **ADJOURN** the meeting at 6:50 p.m. All of the members voting yea, the motion passed.

David Robar
Signature

3.10.16
Date



Oath

(You need not give an oath if you object. If you object to giving an oath, please notify the hearing officer or secretary before signing below.)

I, the undersigned, hereby solemnly swear that the testimony I give at this proceeding will be the truth, the whole truth and nothing but the truth:

PRINT NAME:

SIGN NAME:

- 1. Redwell KING
- 2. TIM KONIEMI
- 3. JIM LARSEN
- 4. Denis DeVito
- 5. Jeffrey Hurley
- 6. Tucker Brooks
- 7. J. Coy
- 8. GREG ERNST
- 9. _____
- 10. _____
- 11. _____

- 1. [Signature]
- 2. [Signature]
- 3. [Signature]
- 4. 1397 Rivie [Signature]
216-572-6858
- 5. [Signature]
- 6. [Signature]
- 7. [Signature]
- 8. [Signature]
- 9. _____
- 10. _____
- 11. _____

Prepared by: The City of Lakewood Law Department, 12650 Detroit Ave., Lakewood, Ohio 44107

FOR CITY USE ONLY

Lakewood Administrative Procedure: ABR/BBS Citizens Advisory Civil Svc. Dangerous Dog Income Tax Appeals Loan Approval Nuisance Abatement Appeals Parking Planning Zoning Appeals Other:

Date of Proceeding: February 11, 2016

Russell, Jason

From: Heather Rudge <heather@hpgroup-llc.com>
Sent: Wednesday, February 03, 2016 2:02 PM
To: Russell, Jason
Subject: RE: BBS - garage

Jason,

Thank you for the update. Based on the letter I received from Mike Molinski and your email indicating I do not have to show up at the ABR/BBS meeting, I am requesting that my appeal be withdrawn from the BBS docket.

Thanks,
Heather

Heather Rudge

2425 W. 11th Street #4
Cleveland, OH 44113
p: 216.302.3510
c: 216.536.3159
heather@hpgroup-llc.com

-----Original Message-----

From: Russell, Jason [<mailto:Jason.Russell@lakewoodoh.net>]
Sent: Wednesday, February 03, 2016 1:33 PM
To: Heather Rudge <heather@hpgroup-llc.com>
Subject: RE: BBS - garage

Heather,

In light of Mike's findings based on the survey you submitted no variance is necessary. As such, your appeal which is on the ABR docket for February is not necessary. Can you just send me a quick email to withdrawing your appeal?

Thanks,

Jason

Jason M. Russell, AICP
City Planner
Department of Planning & Development
City of Lakewood
12650 Detroit Avenue
Lakewood, OH 44107
216-529-5933 (Office)

Russell, Jason

From: John Czarnecki <johnczar2000@hotmail.com>
Sent: Thursday, February 04, 2016 12:14 PM
To: Russell, Jason
Cc: Mark Czarnecki
Subject: Re: 2143 ATKINS

Jason,

I am requesting a postponement of the appeal hearing on February 11, 2016. As discussed earlier I will not be in town for the hearing. I will be available for next months hearings on March 10, 2016.

Thanks,

John

From: Russell, Jason <Jason.Russell@lakewoodoh.net>
Sent: Monday, January 25, 2016 9:08 AM
To: John Czarnecki
Cc: Mark Czarnecki
Subject: Re: 2143 ATKINS

Thank you John.

I will add this letter to your application for appeal.

Jason

On Jan 24, 2016 6:20 PM, John Czarnecki <johnczar2000@hotmail.com> wrote:

Jason,

The results of this study indicate that my downspouts are tied directly into the sanitary sewer. Re-routing my downspouts are the only part of this study I am willing to participate in.

Everything else in this study is just speculation. I do not have any water in my basement now, and I do not want to introduce water or radon gas into my basement. Based on the time my property was built there are no footer drains along my foundation. Tampering with anything along the foundation after not having any problems for 100 years could cause other problems. This could affect the value of my property along with health and wellness of my tenants.

I will not be available to attend the appeal hearing on February 11th but I authorize my son Mark Czarnecki to act for me. I will be available by phone to answer any questions at that time.

Please reply to this email so I can be assured that you received it.

Thank You,

Russell, Jason

From: mark Czarnecki <markczar@hotmail.com>
Sent: Thursday, February 04, 2016 3:12 PM
To: Russell, Jason
Subject: Defer Request

Jason ,

I am requesting a defer on the February 11th 2016 hearing. I need more time to look into the history of my house. I will be available for the March 10th 2016 hearing .

Thank you,

Mark Czarnecki

WATER CONTROLLING SPECIFICATIONS
APPROVED BY THE BOARD OF BUILDING STANDARDS
ON STRUCTURES WITH TILE FOUNDATION WALLS

- Step 1 Remove approximately 12" of concrete floor adjoining the walls on the inside of the basement.
- Step 2 Dig out and grade ditch to the bottom of the footer; exposing top and sides of footer, ditch can be deeper to accommodate any pipes crossing.
- Step 3 Install a sump crock (PVC container with punch outs on sides by manufacturer) 18" wide and 30" deep. Install sump pump to outside downspout line (storm sewer 36" below grade). All drainage intended to be by gravity, no trap is necessary.
- Step 4 Line the bottom of the ditch with #8 washed limestone as a bedding for drain tile.
- Step 5 Place 3" clay or 3" or 4" PVC drain tiles in ditch with gradual grade to sump crock.
- Step 6 Cover drain tiles with #57 washed limestone as a filter approximately 1" over top of footer.
- Step 7 Hang 2 sheets of 4 mil visqueen folded in half from ground level (grade) down to inside of ditch, stopping 1" from top of footer as a vapor barrier. The visqueen is attached to wall with 1/2" concrete nails and provide seam joiners and top cap.
- Step 8 Install 4x8 sheets of thermopanel (plastic material) over visqueen, from grade down to inside of ditch, again stopping 1" from top of footer, anchor thermopanel with rivets into mortar joints of tile walls. (Nylon rivets spaced approximately 15" to 24" apart).
- Step 9 Cover #57 washed limestone with 1" of #8 limestone as a bedding for cement.
- Step 10 Replace floor area removed with concrete minimum of 3" thick.
- Step 11 Electrical outlet for sump pump will be installed by a licensed electrician.
- Step 12 In the event there is no footer leave 4" of earth adjoining the wall, intact for support of the wall, then dig the ditch. The 4" spacing is left as if there were a footer.

REFINISHING OF WALLS: If the customer prefers not to have thermopanel, install stucco on the walls. With stucco, nail 2.5 gauge metal lath over the visqueen, then apply a 1" coating of cement as a finish.

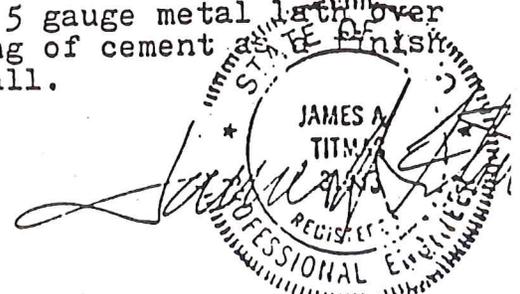
James A. Titmas and Associates, Incorporated
P.O. Box 2333 • Streetsboro, Ohio 44240

INSTALLATION OF B-DRY SYSTEM
ON STRUCTURES WITH TILE FOUNDATION WALLS

- Step 1 - Remove approximately 12" of concrete floor adjoining the walls on the inside of the basement.
- Step 2 - Dig out and grade ditch to the bottom of the footer, exposing top and sides of footer, ditch can be deeper to accommodate any pipes crossing.
- Step 3 - Install a sump crock (PVC container with punch outs on sides by manufacturer) 18" wide and 30" deep, install sump pump and exit discharge pipe (1½" PVC) with check valve to the outside downspout line (storm sewer). All drainage intended to be by gravity, no trap is necessary.
- Step 4 - Line the bottom of the ditch with #8 washed limestone as a bedding for drain tile.
- Step 5 - Place 3" clay or PVC drain tiles in ditch with approximately ¼" spacing, gradual grade to sump crock.
- Step 6 - Cover drain tiles with #57 washed limestone as a filter approximately 1" over top of footer.
- Step 7 - Hang 2 sheets of 4 mil visqueen folded in half from ground level (grade) down to inside of ditch stopping 1" from top of footer as a vapor barrier. The visqueen is attached to wall with ½" concrete nails.
- Step 8 - Install 4 x 8 sheets of thermopanel (plastic material made by Goodrich Corp. exclusively for B-Dry System) over visqueen from grade down to inside of ditch, again stopping 1" from top of footer, anchor thermopanel with rivets into mortar joints of tile walls. (Nylon rivets spaced approximately 15" to 24" apart).
- Step 9 - Cover #57 washed limestone with 1" of #8 limestone as a bedding for cement.
- Step 10 - Replace floor area removed with concrete minimum of . 3" thick.
- Step 11 - Electrical outlet for sump pump will be installed by a licensed electrician.
- Step 12 - In the event there is no footer we leave 4" of earth adjoining the wall intact for support of the wall then dig the ditch. The 4" spacing is left as if there were a footer.

REFINISHING OF WALLS

If the customer prefers not to have thermopanel we can stucco the walls. With stucco, we nail 2.5 gauge metal lath over the visqueen then apply a 1" coating of cement as a finish. We have eliminated the use of drywall.





CONTRACTORS, INC.

- divisions:
- SPU General Construction
 - SPU Remodeling Service
 - SPU Condo Conversions
 - SPU Realty Services

SERVICE—PERFORMANCE—UNEXCELED
 553 E. Highland Road • Macedonia, Ohio 44056
 Cleveland: (216) 467-7100
 Akron: (216) 650-9565

Specialists in:

- Foundation Restoration
- Foundation Waterproofing
- Pre-Purchase Inspections
- FHA and VA Certifications

REVISED ADDENDUM

BRICK FOUNDATION

MICHIGAN LEDGE

- Step 1: We will run Dura-shield from below floor level in trench up wall to 4" above ledge.
- Step 2: On upper wall we will run Dura-shield from grade to ledge.
- Step 3: Hang 2 sheets of 4 mil visqueen folded in half from ground level (grade) down to inside of ditch stopping 1" from top of footer as a vapor barrier. The visqueen is attached to wall with 1/2" concrete nails.
- Step 4: We will then line ledge with 2" of gravel and concrete 2" thick entire ledge over brick base and gravel.

We hope this meets with your approval regarding Helen Schupp at 1467 Olivewood, Lakewood, Ohio 44107.

The enclosed information conforms to provisions of Dwelling House code based on the fact that B-Dry systems had similar system approved by the Board of Building Standards of The City of Lakewood.

Sincerely,

John Horner
 John Horner
 Vice President and
 General Manager



COPY



Specialists in:

Affiliate divisions:

- SPU General Construction
- SPU Remodeling Service
- SPU Condo Conversions
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- Pre-Purchase Inspections
- FHA and VA Certifications

BRICK FOUNDATIONS
WATER CONTROLLING SPECIFICATIONS

- Step 1: Remove approximately 12" of concrete floor adjoining the walls on the inside of the basement.
- Step 2: Dig out and grade ditch to the bottom of the footer, exposing top and sides of footer, ditch can be deeper to accomodate any pipes crossing, in the event there is no footer we will leave 4" of earth adjoining the wall, intact for support of the wall, then dig the ditch. The 4" spacing is left as if there were a footer.
- Step 3: Install a sump crock (PVC container with punch outs on sides) 18" wide and 24" deep. Install sump pump to outside downspout line (storm sewer 36" below grade). All drainage intended to be by gravity, no trap is necessary.
- Step 4: Line the bottom of the ditch with #8 washed limestone as a bedding for drain tile.
- Step 5: Place 4" PVC 3500 S&D drain tiles in ditch with gradual grade to sump crock. Every 8 feet an approximate 1" drop.
- Step 6: Cover drain tiles with #8 washed limestone as a filter approximately 1" over top of footer.
- Step 7: Install 4 foot sheets of thermopanel (Dura-shield) from grade down to inside of ditch, again stopping 1" from top of footer, anchor thermopanel with rivets into mortar joints of brick walls. (Nylon rivets spaced approximately 15" to 24" apart).
- Step 8: Cover washed limestone with 1" of #8 limestone as a bedding for cement.
- Step 9: Replace floor area removed with concrete minimum of 3" thick.
- Step 10: Electrical outlet for sump pump if necessary will be installed by a licensed electrician.

*2 Sheets Add
 VISQUEEN
 PER SECTION*

ALL BRICK FOUNDATIONS MUST HAVE DURA-SHIELD --NO EXCEPTIONS



COPY

Licensed — Bonded — Insured

**WATER CONTROLLING SPECIFICATIONS
APPROVED BY THE BOARD OF BUILDING STANDARDS
ON STRUCTURES WITH CEMENT BLOCK FOUNDATION WALLS**

- Step 1 Remove approximately 12" of concrete floor adjoining the walls on the inside of the basement.
- Step 2 Dig out and grade ditch to the bottom of the footer, exposing top and sides of footer, ditch can be deeper to accommodate any pipes crossing.
- Step 3 In the event there is no footer, leave 4" of earth, adjoining the wall, intact for support of the wall, then dig the ditch. The 4" spacing is left as if there was a footer.
- Step 4 Install a sump crock (PVC container with punch outs on sides by manufacturer) 18" wide and 30" deep, install sump pump and exit discharge pipe (1 1/2" PVC) with check valve to the outside downspout line (storm sewer 36" below grade). All drainage intended to be by gravity, no trap is necessary.
- Step 5 Drill 1/2" hole into each core of the first course of the cement block, as many as necessary, including the mortar joints. This procedure allows water, which may be present, to drain and dry out. Route the hole down approximately 1/4" wide with a chisel to top of footer.
- Step 6 Line the bottom of the ditch with #8 washed limestone as a bedding for drain tile.
- Step 7 Place 3" clay or 3" or 4" PVC in ditch with gradual grade to sump crock.
- Step 8 Cover drain tiles with #57 washed limestone as a filter, approximately 1" over top of footer.
- Step 9 Hang 2 sheets of 4 mil visqueen folded in half from ground level (grade) down to inside of ditch, stopping 1" from top of footer as a vapor barrier. The visqueen is attached to the wall with 1/2" concrete nails.
- Step 10 Install 4x8 sheets of thermopanel (plastic material) over visqueen, from grade down to inside of ditch, again stopping 1" from top of footer, anchor thermopanel with rivets into mortar joints of block walls and provide seam joiner and top cap. (Nylon rivets spaced approximately 15" to 24" apart)
- Step 11 Cover #57 washed limestone with 1" of #8 limestone as a bedding for cement.

CITY OF LAKEWOOD, OHIO

Cement Block Foundation Walls - Continued
Page 2

Step 12 Replace floor area removed, with concrete, minimum of 3" thick.

Step 13 Electrical outlet for sump pump will be installed by a licensed electrician.

REFINISHING OF WALLS: If the customer prefers not to have thermopanel, install stucco on the walls. With stucco, nail 2.5 gauge metal lath over the visqueen, then apply a 1" coating of cement as a finish.

CITY OF LAKEWOOD, OHIO

WATER CONTROLLING SPECIFICATIONS
APPROVED BY THE BOARD OF BUILDING STANDARDS
ON STRUCTURES WITH SANDSTONE AND BRICK MICHIGAN LEDGE FOUNDATION WALLS

- Step 1 Remove approximately 12" of the concrete floor adjoining the walls on the inside of the basement.
- Step 2 Dig out and grade ditch to the bottom of the footer, exposing top and sides of the footer, ditch can be deeper to accommodate any pipes crossing.
- Step 3 Install a sump crock (PVC container with punch out sides by manufacturer) 18" wide and 30" deep. Install sump pump to outside downspout line (storm sewer 36" below grade). All drainage intended to be by gravity, no trap is necessary.
- Step 4 Line the ditch bottom with #8 washed limestone as a bedding for the drain tile.
- Step 5 Place 3" clay or 3" or 4" PVC drain tiles in the ditch with a gradual grade to the sump crock.
- Step 6 Cover drain tiles with #57 washed limestone as a filter approximately 1" over the top of the footer.
- Step 7 Hang 2 sheets of 4 mil visqueen folded in half from top of the brick down to the inside of the ditch, stopping 1" from the top of the footer as a vapor barrier. The visqueen is attached to the wall with 1/2" concrete nails and provide seam joiners and top cap.
- Step 8 Install 4x8 sheets of thermopanel (plastic material) over visqueen, from the top of the brick inside the ditch, stopping 1" from top of footer, anchor thermopanel with nylon rivets into mortar joints of the brick wall and space rivets 15" to 24" apart.
- Step 9 Cover #57 washed limestone with 1" of #8 limestone as a bedding for cement.
- Step 10 Replace floor area where removed with concrete minimum of 3" thick.
- Step 11 Electrical outlet for sump pump will be installed by a licensed electrician.
- Step 12 In the event there is no footer, leave 4" of earth adjoining the wall intact for support of the wall, then dig the ditch. The 4" spacing is left as if there were a footer.

REFINISHING OF THE WALLS: If the customer prefers not to have thermopanel, install stucco on the walls. With stucco, nail 2.5 gauge metal lath over the visqueen, then apply a 1" coating of cement as a finish.

This method and system is recommended only when the earth is of clay, shale, or a combination thereof. If the earth is sand, this method is not recommended.

CITY OF LAKEWOOD, OHIO

REVISED ADDENDUM
WATER CONTROLLING SPECIFICATIONS
APPROVED BY THE BOARD OF BUILDING STANDARDS
ON STRUCTURES WITH BRICK FOUNDATION WALLS
MICHIGAN LEDGE

- Step 1 Run Dura-shield from below floor level in trench up wall to 4" above ledge.
- Step 2 Run Dura-shield from grade to ledge on upper wall.
- Step 3 Hang 2 sheets of 4 mil visqueen folded in half from ground level (grade) down to inside of ditch stopping 1" from top of footer as a vapor barrier. The visqueen is attached to wall with 1/2" concrete nails.
- Step 4 Line entire ledge with 2" of gravel and concrete 2" thick over brick base and gravel.

CITY OF LAKEWOOD, OHIO

WATER CONTROLLING SPECIFICATIONS
APPROVED BY THE BOARD OF BUILDING STANDARDS
ON STRUCTURES WITH SANDSTONE BLOCK FOUNDATION WALLS

- Step 1 Remove approximately 12" of the concrete floor adjoining the walls on the inside of the basement.
- Step 2 Dig out and grade ditch to the bottom of the footer, exposing top and sides of the footer, ditch can be deeper to accommodate any pipes crossing.
- Step 3 Install a sump crock (PVC container with punch out sides by manufacturer) 18" wide and 30" deep. Install sump pump to outside downspout line (storm sewer 36" below grade). All drainage intended to be by gravity, no trap is necessary.
- Step 4 Line the ditch bottom with #8 washed limestone as a bedding for the drain tile.
- Step 5 Place 3" clay or 3" or 4" PVC drain tiles in the ditch with a gradual grade to the sump crock.
- Step 6 Cover drain tiles with #57 washed limestone as a filter approximately 1" over the top of the footer.
- Step 7 Hang 2 sheets of 4 mil visqueen folded in half from the ground level (grade) down to the inside of the ditch, stopping 1" from the top of the footer as a vapor barrier. The visqueen is attached to the wall with 1/2" concrete nails and provide seam joiners and top cap.
- Step 8 Install 4x8 sheets of thermopanel (plastic material) over visqueen, from grade down to inside of the ditch, again stopping 1" from the top of the footer, anchor thermopanel with plastic rivets into mortar joints of tile walls. (Nylon rivets spaced approximately 15" to 24" apart).
- Step 9 Cover #57 washed limestone with 1" of #8 limestone as a bedding for cement.
- Step 10 Replace floor area where removed with concrete minimum 3" thick.
- Step 11 Electrical outlet for sump pump will be installed by a licensed electrician.
- Step 12 In the event there is no footer, leave 4" of earth adjoining the wall intact for support of the wall, then dig the ditch. The 4" spacing is left as if there were a footer.

REFINISHING OF THE WALLS: If the customer prefers not to have thermopanel, install stucco on the walls. With stucco, nail 2.5 guage metal lath over the visqueen, then apply a 1" coating of cement as a finish.

CITY OF LAKEWOOD, OHIO

**WATER CONTROLLING SPECIFICATIONS
APPROVED BY THE BOARD OF BUILDING STANDARDS
ON STRUCTURES WITH BRICK FOUNDATION WALLS**

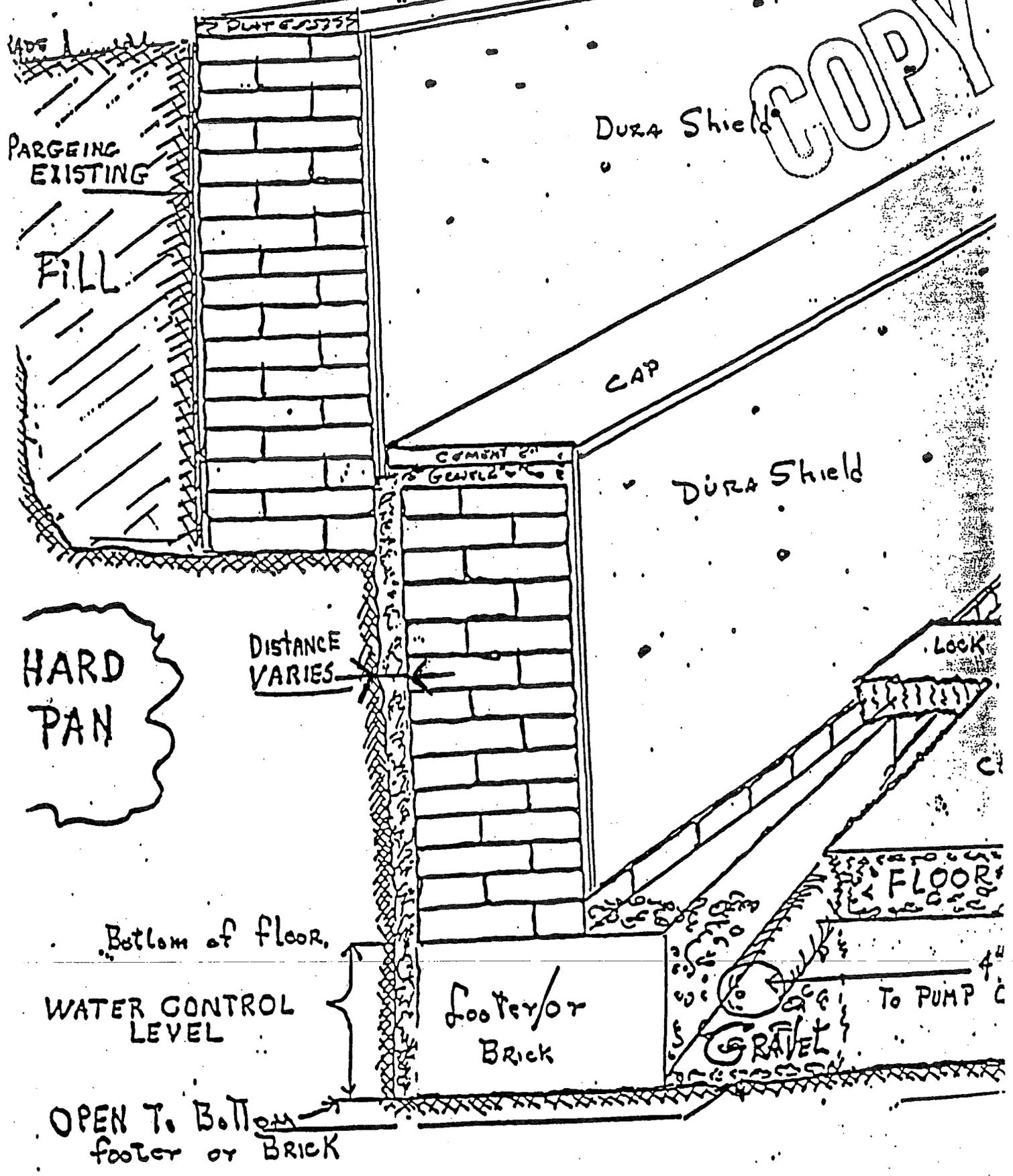
- Step 1 Remove approximately 12" of concrete floor adjoining the walls on the inside of the basement.
- Step 2 Dig out and grade ditch to the bottom of the footer, exposing top and sides of footer, ditch can be deeper to accommodate any pipes crossing. In the event there is no footer, leave 4" of earth adjoining the wall intact for support of the wall, then dig the ditch. The 4" spacing is left as if there were a footer.
- Step 3 Install a sump crotch (PVC container with punch outs on sides by manufacturer) 18" wide and 24" deep. Install sump pump to outside downspout line (storm sewer 36" below grade). All drainage intended to be by gravity, no trap is necessary.
- Step 4 Line the bottom of the ditch with #8 washed limestone as a bedding for drain tile.
- Step 5 Place 4" PVC 3500 S&D drain tiles in ditch with gradual grade to sump crotch. Every 8' an approximate 1" drop.
- Step 6 Cover drain tiles with #8 washed limestone as a filter approximately 1" over top of footer.
- Step 7 Hang 2 sheets of 4 mil visqueen folded in half from ground level (grade) down to inside of ditch, again stopping 1" from top of footer as a vapor barrier. The visqueen is attached to wall with 1/2" concrete nails and provide seam joiners and top cap.
- Step 8 Install 4' sheets of thermopanel (Dura-shield) from grade down to inside of ditch, stopping 1" from top of footer, anchor thermopanel with rivets into mortar joints of brick walls. (Nylon rivets spaced approximately 15" to 24" apart).
- Step 9 Cover washed limestone with 1" of #8 limestone as a bedding for cement.
- Step 10 Replace floor area removed with concrete minimum of 3" thick.
- Step 11 Electrical outlet for sump pump will be installed by a licensed electrician.

ALL BRICK FOUNDATIONS MUST HAVE DURA-SHIELD --- NO EXCEPTIONS

WATER REDIRECTIONAL

FOR: BRICK DUGOUT BASEMENT

COPY



PARGEING EXISTING

FILL

DURA Shield

CAP

DURA Shield

HARD PAN

DISTANCE VARIES

LOCK

Bottom of floor

WATER CONTROL LEVEL

FOOTER OR BRICK

TO PUMP

GRAVEL

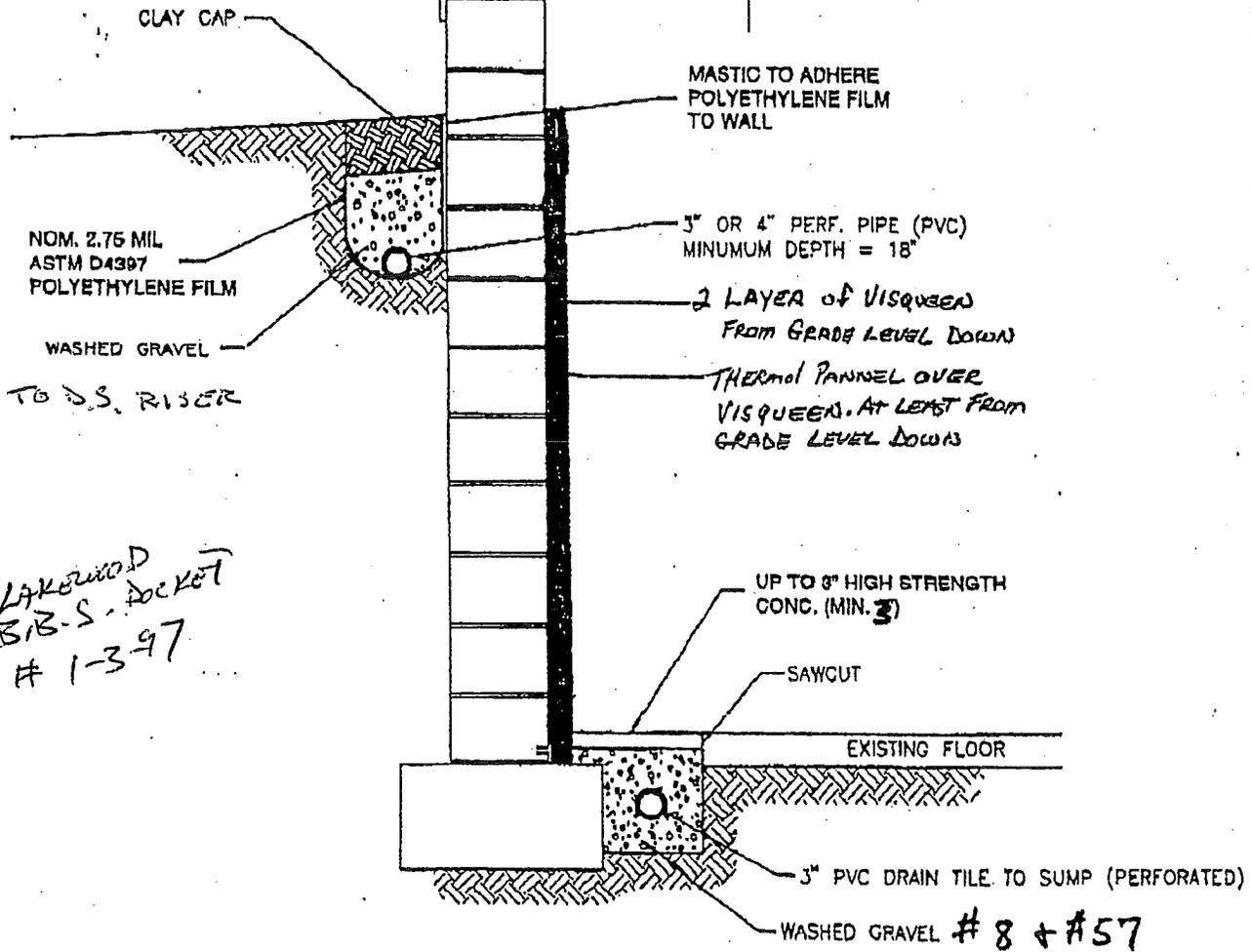
OPEN TO BOTTOM FOOTER OR BRICK

FLOOR

Addendum to
water control method.
Voluntary not mandatory.

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TYPICAL WALL SECTION

Figure 1*

OHIO STATE HOME SERVICES, INC. / EVER-DRY FOUNDATION DRAINAGE SYSTEM

*THIS DRAWING IS FOR ILLUSTRATION PURPOSES ONLY. IT IS NOT INTENDED FOR USE AS A CONSTRUCTION DOCUMENT FOR THE PURPOSE OF DESIGN, FABRICATION OR ERECTION.

The drain tiles outside and inside the walls may be connected to sump pumps, which pump the water into a storm sewer system.

The drainage system of the invention operates as follows. Surface waters outside a building flow into the plastic trough, the gravel, and through openings in the drain tile into the interior of the drain tile located outside the building. This water flows through the drain tile into the storm sewer system. These drain tiles carry away almost all surface water in the area adjacent the building. The small amount of water that may penetrate the building wall and may build up from beneath the building base flows into the drain tile located beneath the base. This water flows through the drain tile and is pumped by a sump pump into the storm sewer system.

BRIEF DESCRIPTION OF THE DRAWINGS

The above mentioned and other features and objects of this invention and the manner of attaining them will become more apparent and the invention itself will be best understood by reference to the following description of the invention taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a vertical section of a portion of a building having a below ground foundation wall and the drainage system of the present invention applied thereto;

FIG. 2 is a vertical section of a building of a slab-type construction and the drainage system of the invention;

FIG. 3 is a diagram showing the connection of drain tile to a sump pump; and

FIG. 4 is a perspective view of an expansion plate used in the system.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to FIG. 1, reference numeral 10 generally designates a drainage system embodying the present invention. A foundation wall 12 is supported on a footer 14. An outside trench 16 is excavated to a shallow depth beneath the ground level next to the outside surface of the wall 12. Preferably, the trench is not less than 18 inches deep, not less than 14 inches wide, and not greater than about three feet deep. A plastic sheet 18 is placed in the trench 16 to form a trough. Then a layer of gravel is placed in the trough to form a bed. The sheet is preferably made of a polyvinyl chloride material. The sheet is preferably visqueen.

Means for draining water is placed in the trough. This means is drain tile 20. The drain tile may take a variety of forms, for example, the drain tile may be corrugated perforated flexible pipe, plastic perforated pipe sections, etc. If pipe sections are used, the individual pipe sections or drain tiles 20 are placed in the trough and secured together by a suitable adhesive to form a pipe line.

After the drain tile 20 is placed in the trough, the trough is filled with gravel 22. The gravel is preferably a washed river bed gravel size #57. The gravel size is large enough that it does not clog the openings in the drain tile. The gravel protects the tile from dirt and allows water to flow therethrough to the tile. The gravel 22 may be covered by the perforated plastic sheet 21 preferably having 18 holes per square foot, and the trench may be back filled with earth.

An inside trench 24 is formed inside of the wall 12 next to the footer 14. A gravel bed is laid and drain tile 26 is placed in the inside trench 24. These tiles, if individual pipe sections, are secured together by a suitable

adhesive to form a pipe line. The respective pipe lines formed by the drain tiles 20 and 26 are inclined to the horizontal to provide for free flow of water through the lines.

The drain tiles 26 are also covered with the gravel 28. The gravel fills the trench 24 and forms a layer on the portion 30 of the top surface 32 of the footer 14 which is located inside the foundation wall 12. The top layer of the gravel is then covered with cement forming the basement floor 34.

An expansion plate 36 is mounted between the foundation wall 12 and adjacent the end of the basement floor 34. The expansion plate 36 extends from the top surface of the footer 14 to the top surface of the floor 34. The expansion plate 36 may have, preferably an arcuate cross section and is provided at the bottom portion thereof with notches 38 for conducting water which flows through weep holes 40 in the bottom of the foundation wall 12 into the gravel.

FIG. 2 shows a drainage system for a building of a slab-type construction. In FIG. 2, the corresponding elements are designed with the same reference numerals as in FIG. 1 with a prime added.

FIG. 2 shows a wall 12' supported on a footer 14'. Outside and inside trenches 16' and 24' are provided at approximately the same level and below the slab 42. Drain tiles 20' and 26' are placed in the trenches 16' and 24', respectively, in a manner discussed above.

A reservoir or pit may be provided at one corner of the building if necessary, and the drain tile directs water into the pit. The pit is generally 18 inches in diameter and 30 inches deep. However, a less deep pit may be used. The pit is usually lined with tile, concrete, plastic or metal (steel). The sump pump 46 pumps water from the pit 44 into the sewer system (not shown).

The method of providing storm drainage of a building is clear from the foregoing description of the drainage system. Nevertheless, it will now be described in more detail.

The trench 16 is at least 14 inches wide and 18 inches deep and not greater than about three feet deep. The portion of the foundation wall which defines the trench should be, preferably, cleaned of any dirt, and a strip of tar of approximately 6 inches wide is applied to the wall just below the ground level. The plastic sheet 18 is attached at one end to the tar and is shaped to form a trough. The sheet 18 is thus secured to the outside of the foundation wall and blocks water flow along the foundation wall. Preferably, the trench is dug 14-18 inches wide and 18-24 inches deep. It is dug adjacent the other side of the building wall and around the perimeter of the building. The trench extends at an angle to the horizontal to provide for water flow in the drain tile. Then a layer of gravel is placed in the trough, perforated drain tiles are placed on that gravel, adhered together and the trough is then filled with gravel. Preferably, the gravel should be preliminarily washed. The perforated plastic sheet may be placed over the gravel and back-filled with earth.

The inside drain is formed on an existing building by using a jack hammer or the like to break up the slab 42 on the perimeter interior of the building. The trench 24' is then dug, a gravel base laid, the drain tile is positioned in the trench and the trench is filled with gravel. Also, before filling the trench with gravel, openings or weep holes are drilled in the foundation wall below the floor level. When applying the system to a building of a slab-type construction, both trenches 16' and 24' are

*What if
each goes
separately?*

*W. weep
holes
#*

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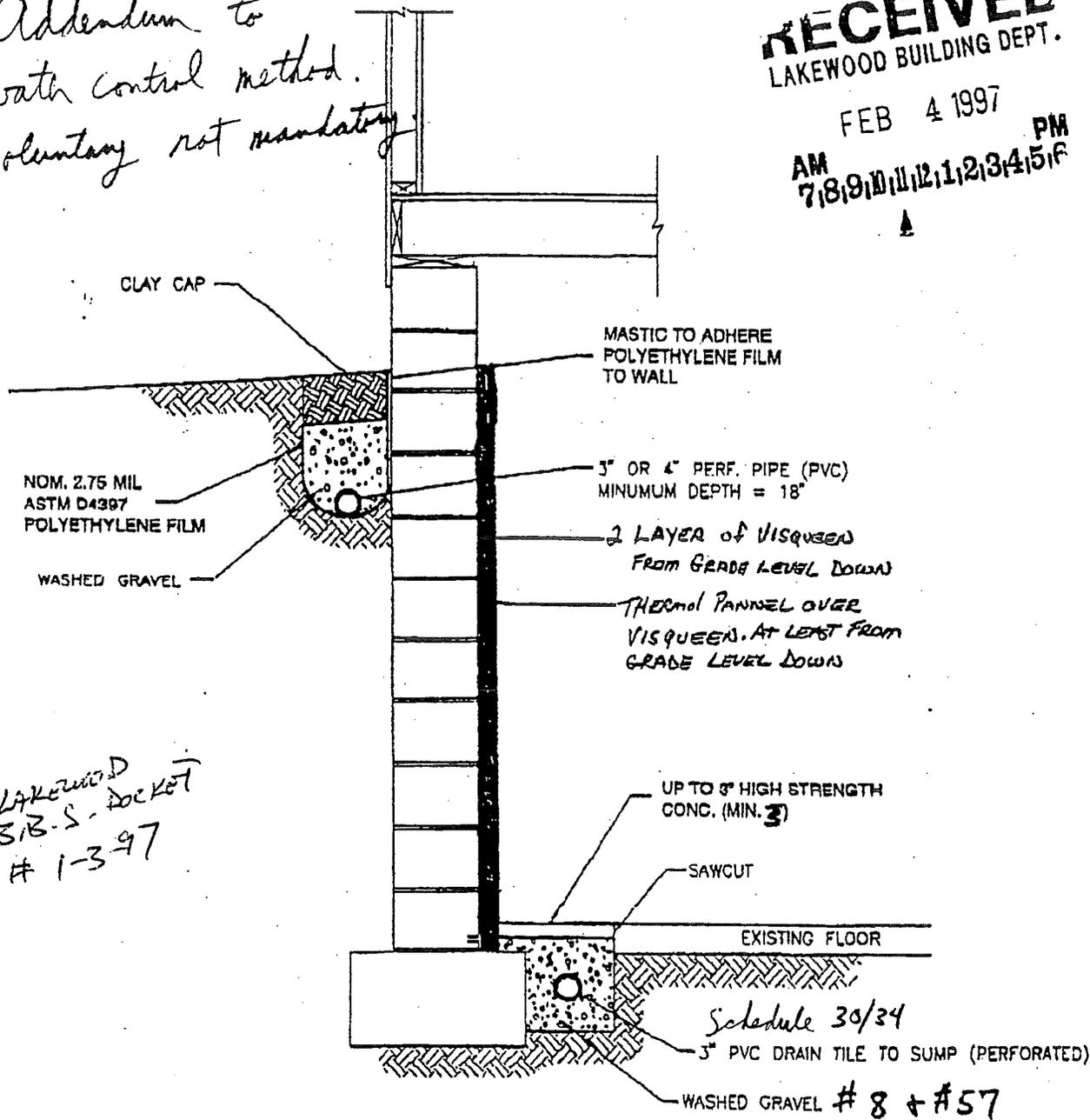
What if rock goes deeper?

W. E. Potter size 7

Addendum to
water control method.
Voluntary not mandatory.

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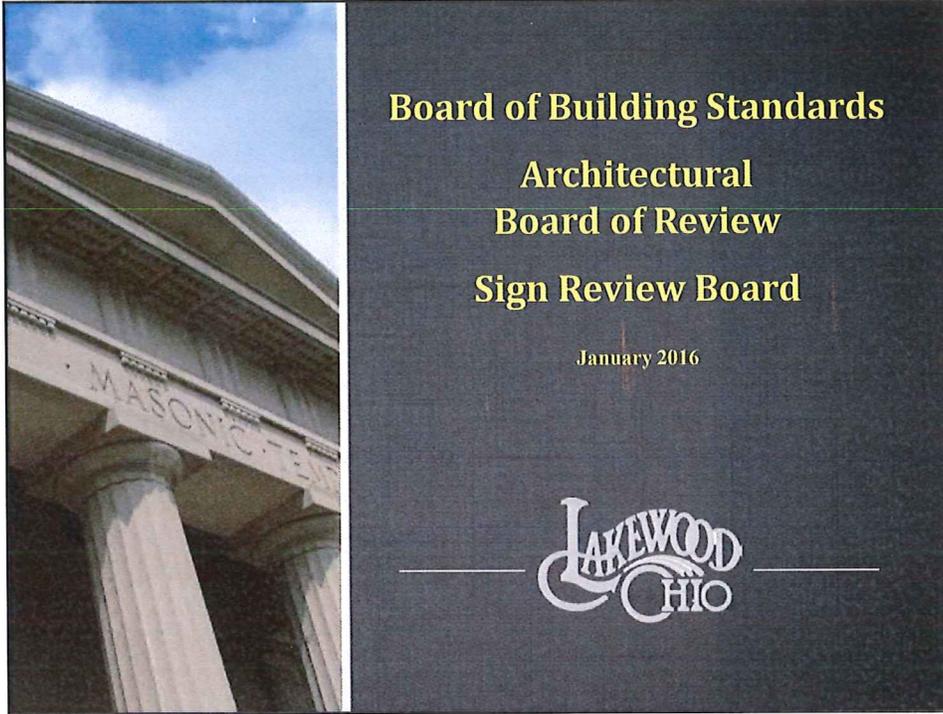
LAKEWOOD
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1-3-97

TYPICAL WALL SECTION

Figure 1*

OHIO STATE HOME SERVICES, INC. / EVER-DRY FOUNDATION DRAINAGE SYSTEM

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January 2016

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OHIO





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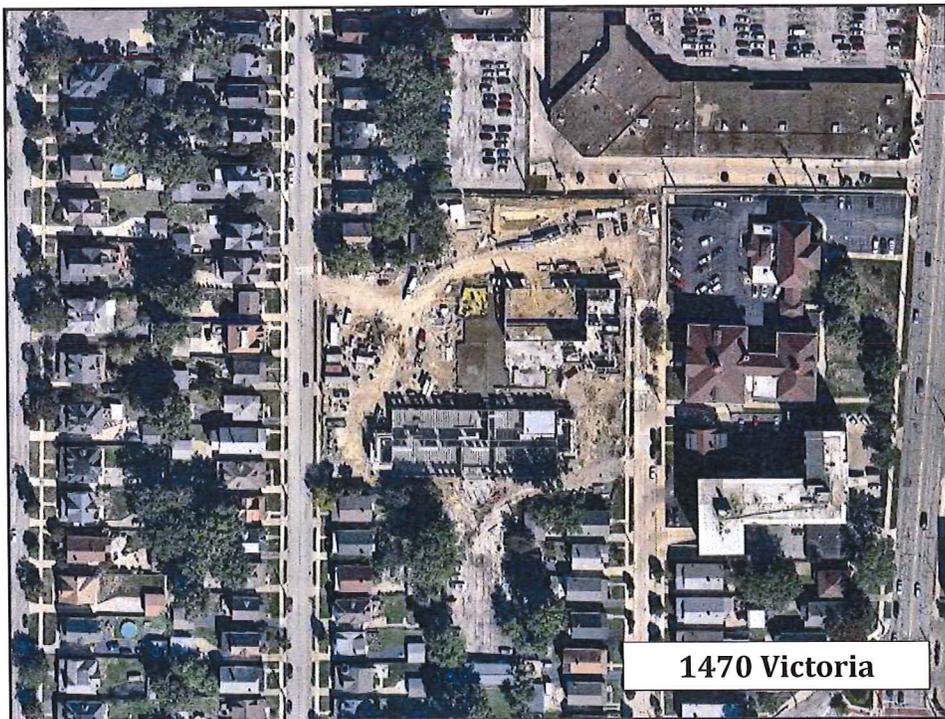
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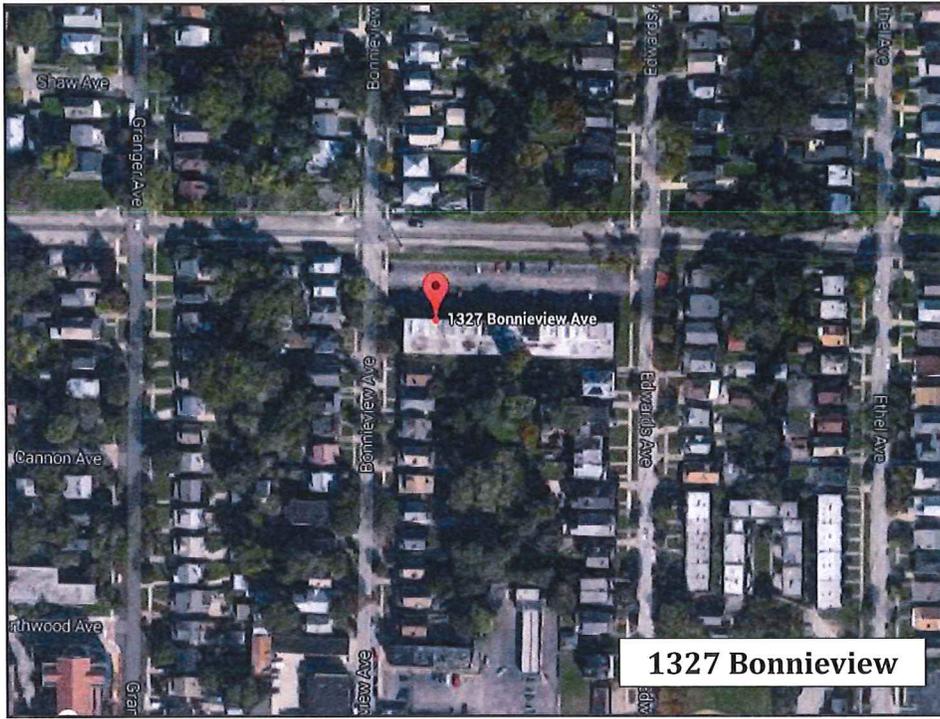


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1470 Victoria





1327 Bonnieview



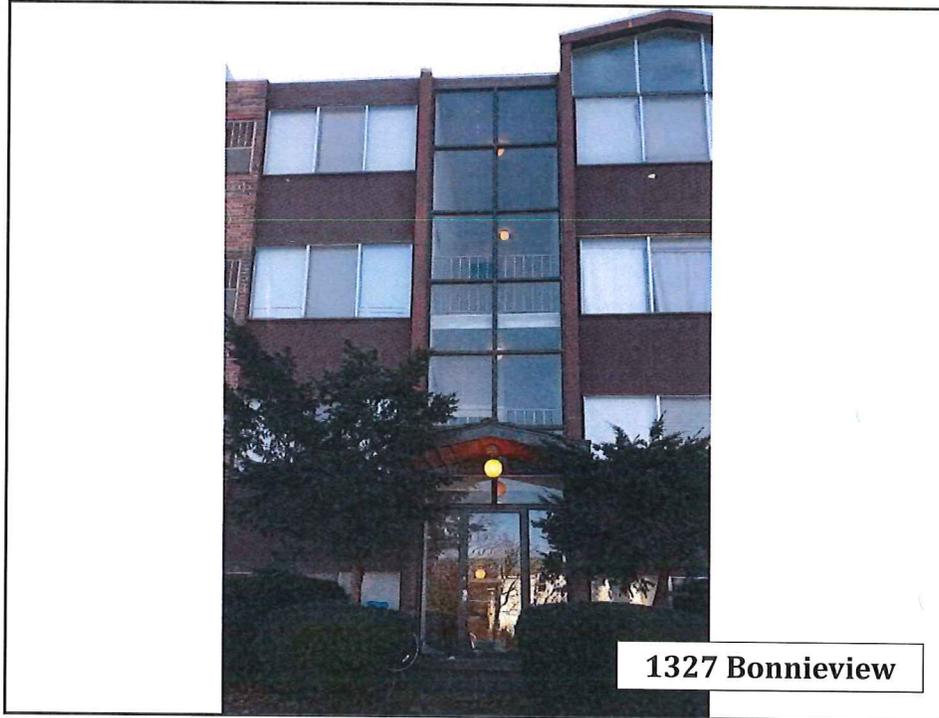
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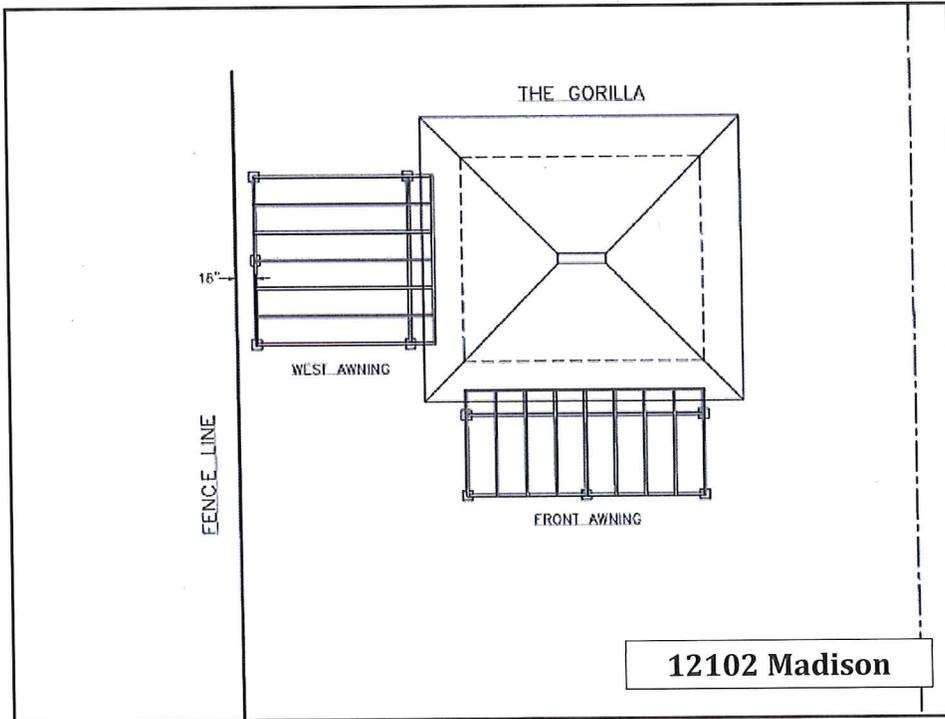
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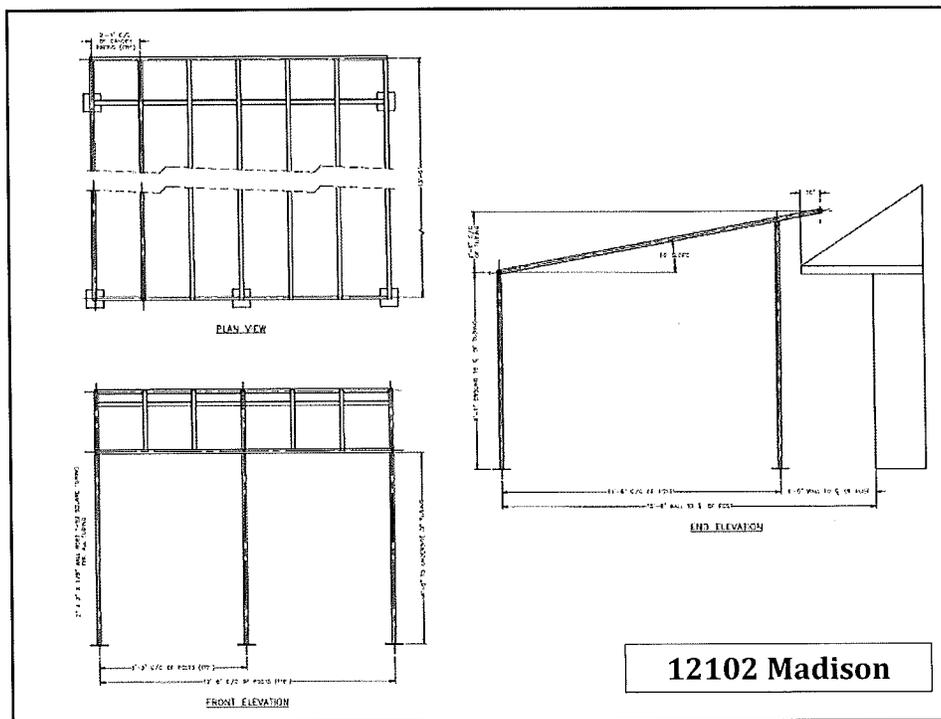
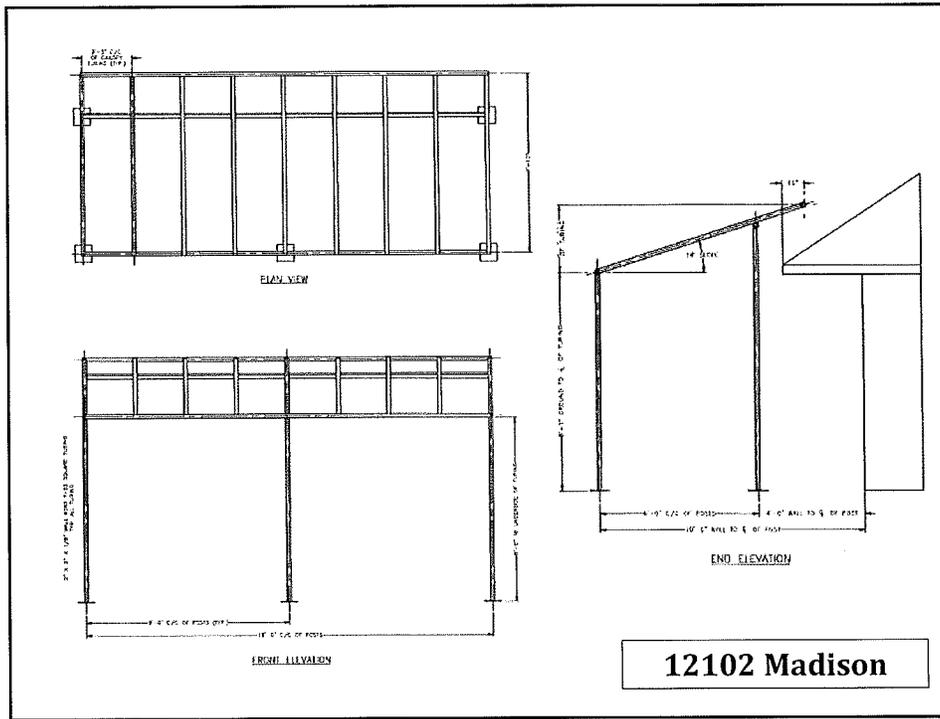


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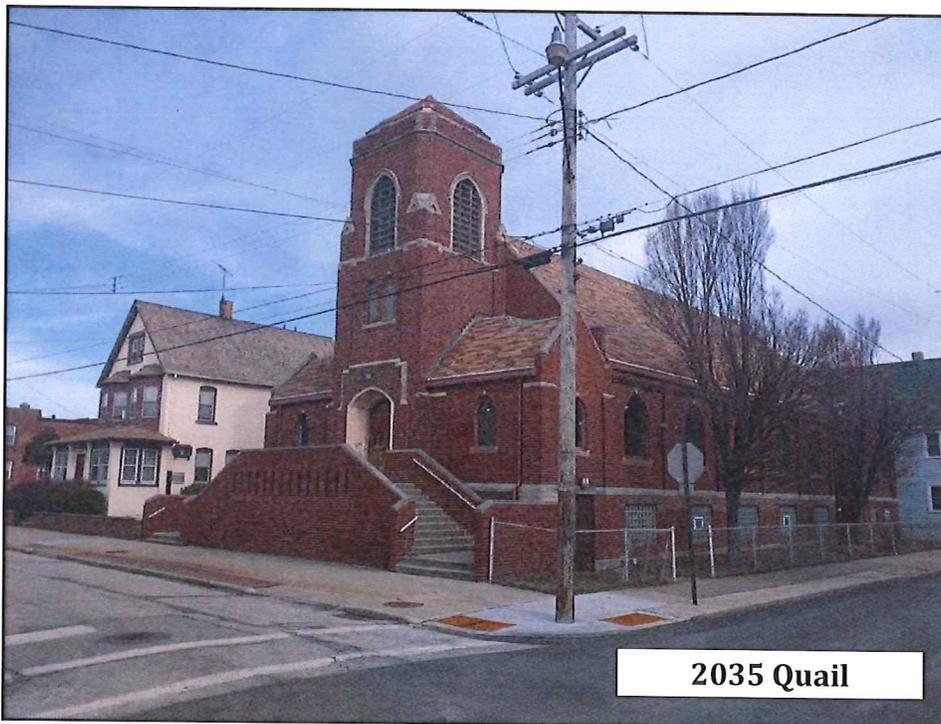
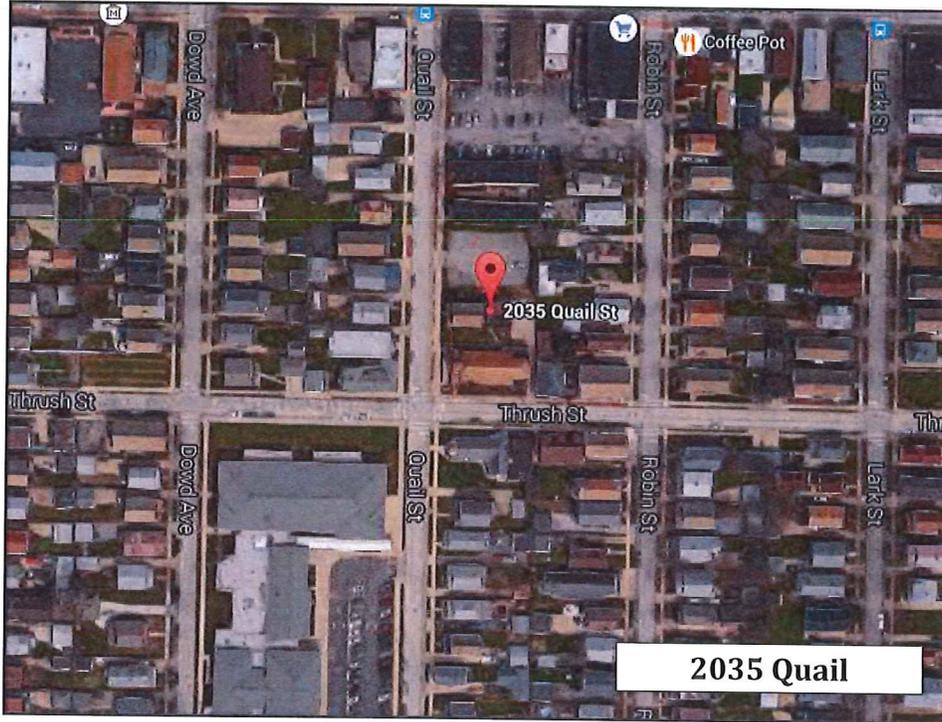




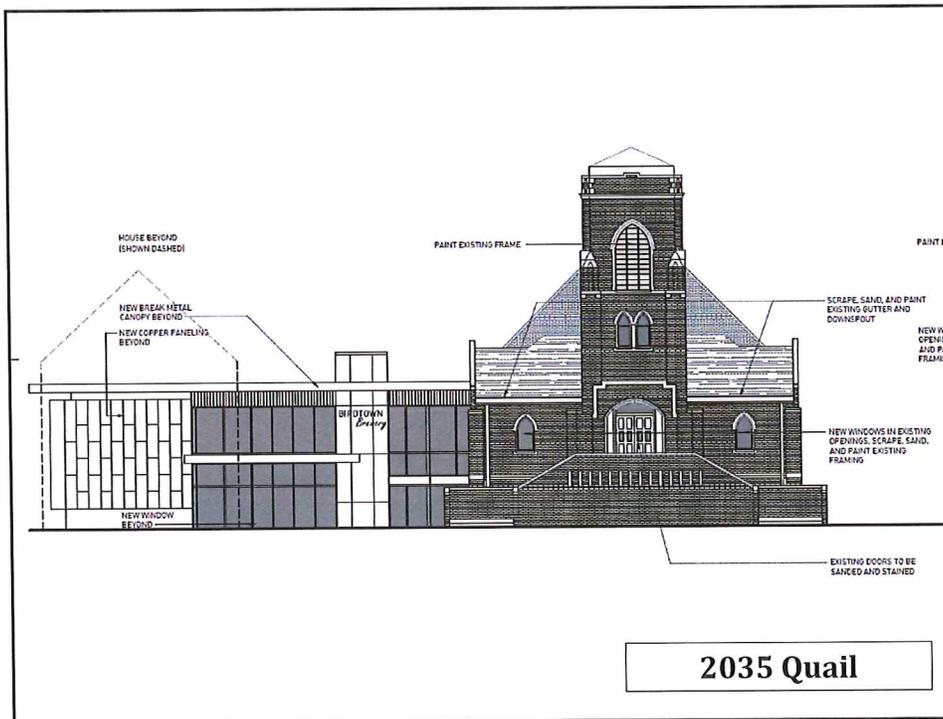
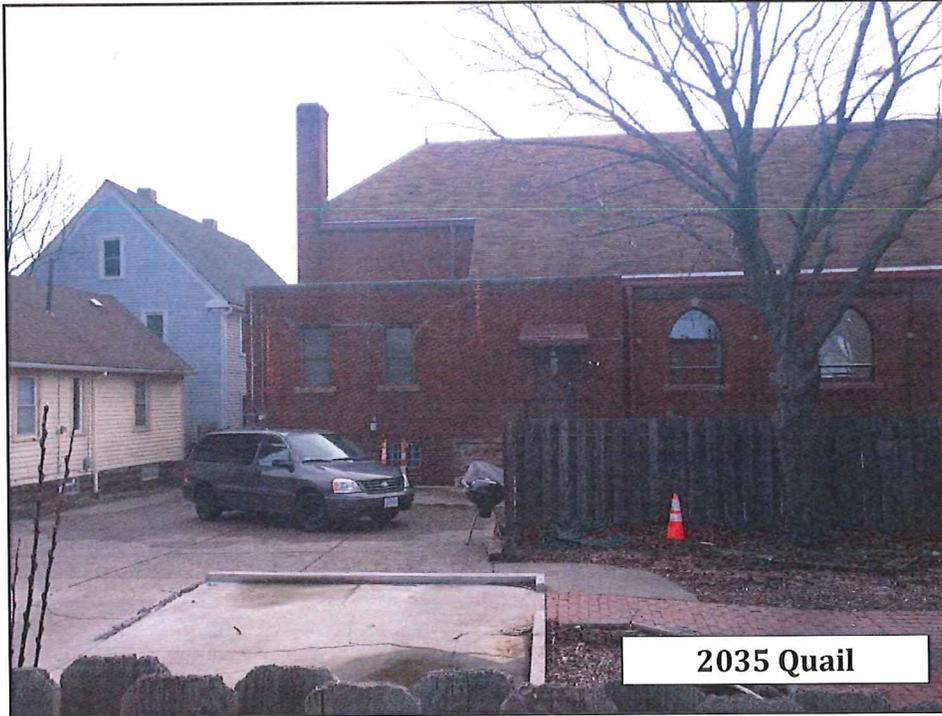
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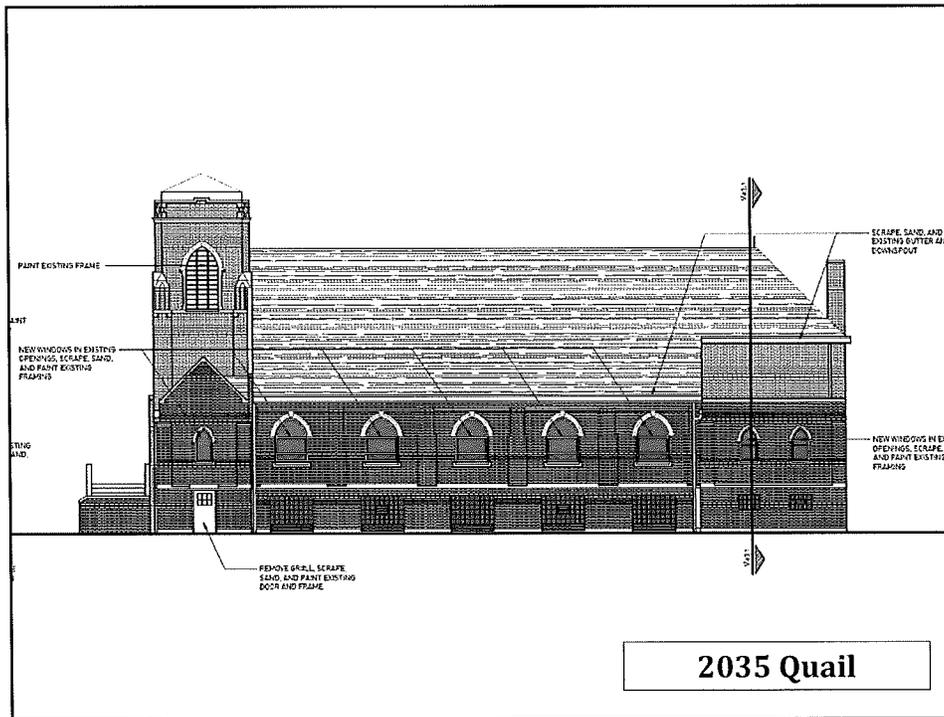
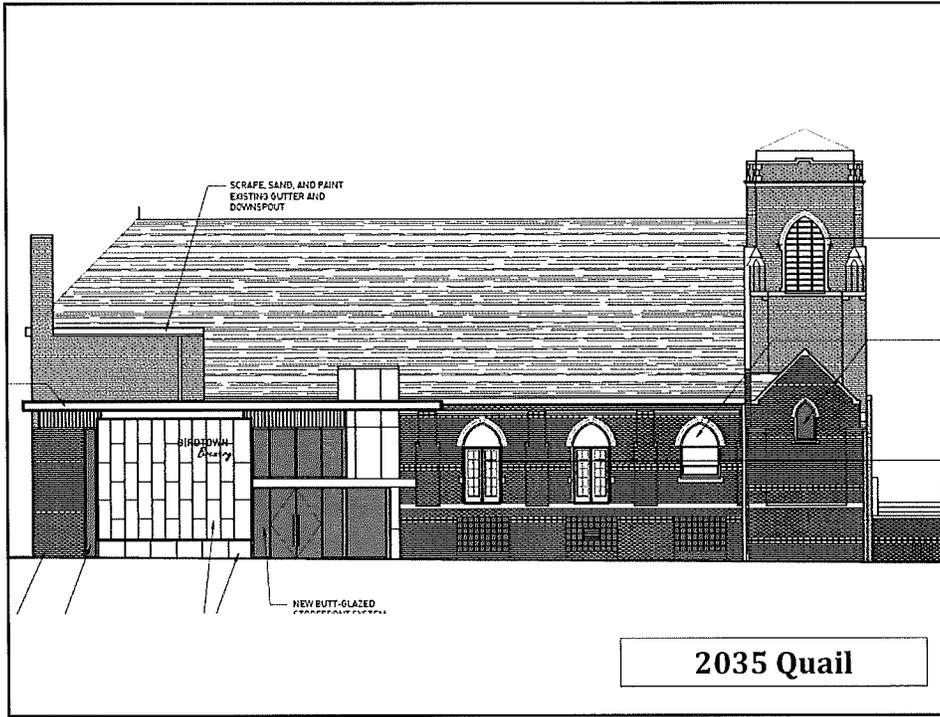


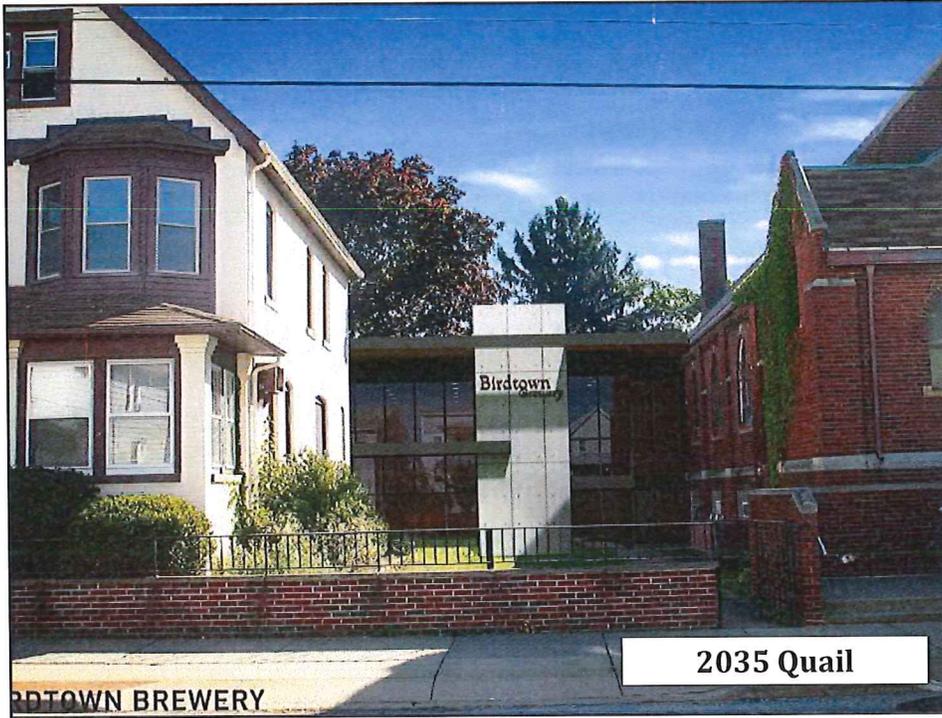
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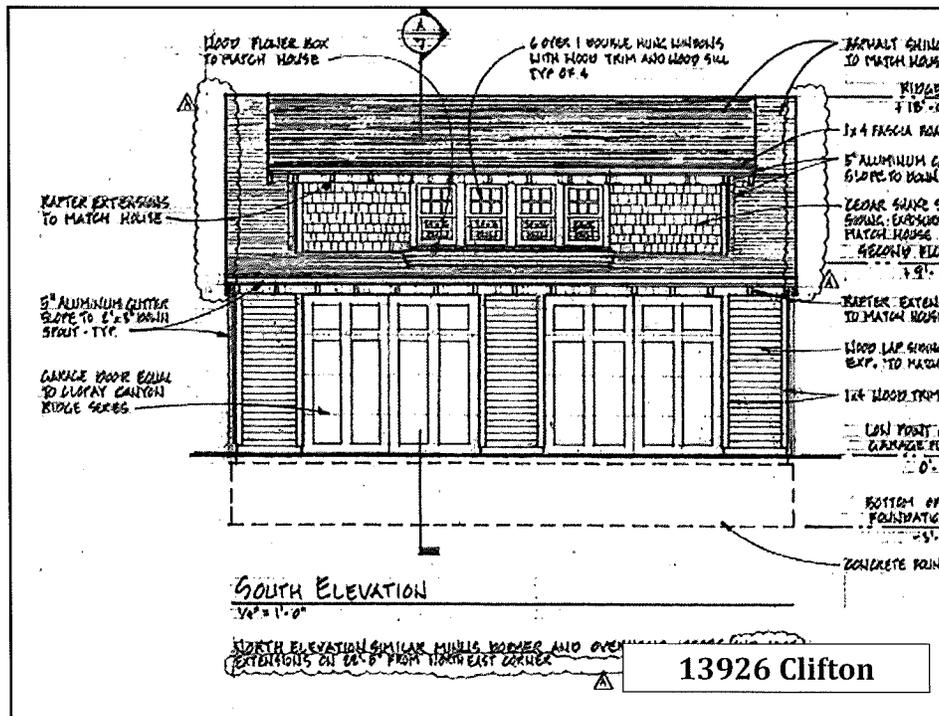
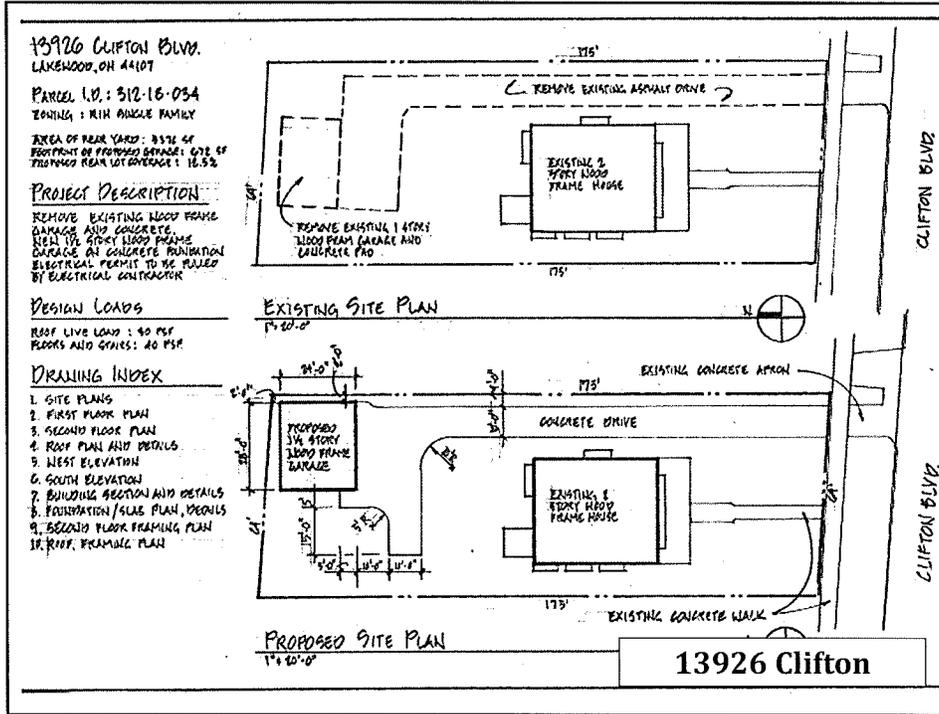


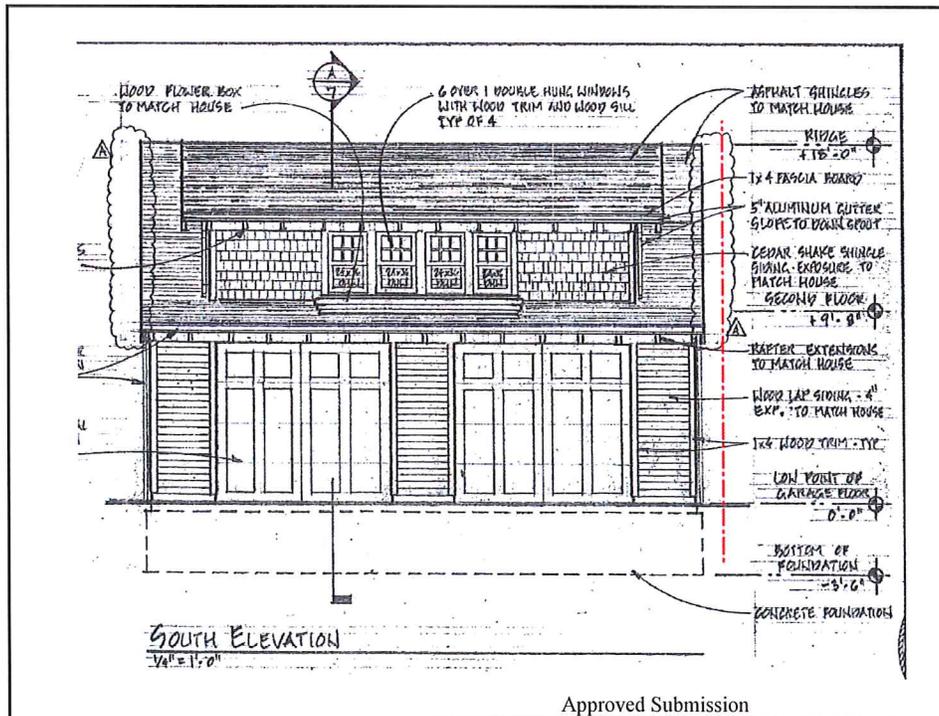
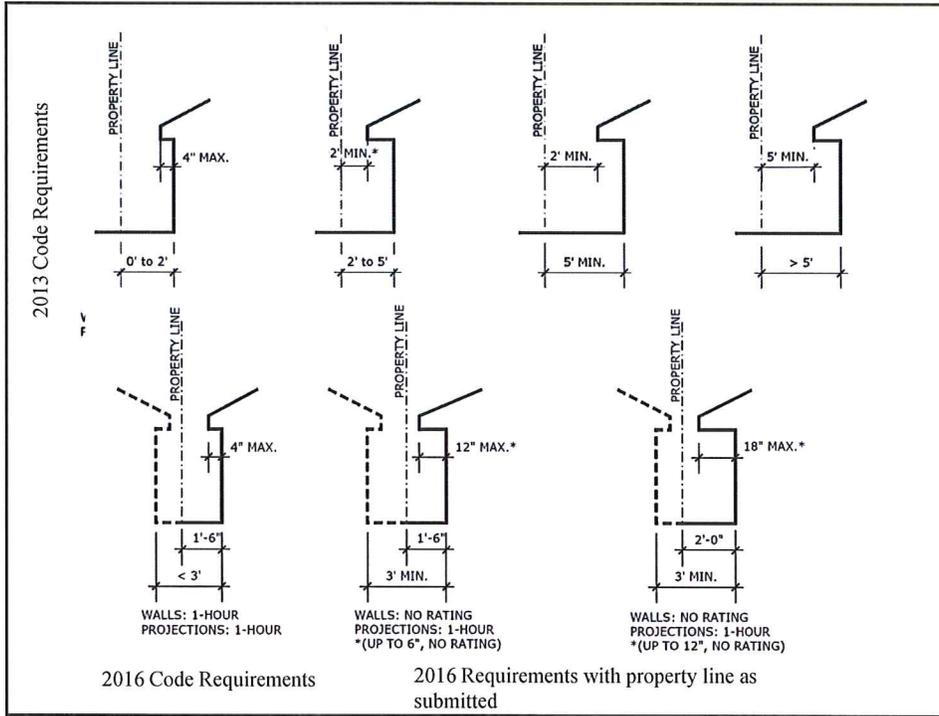


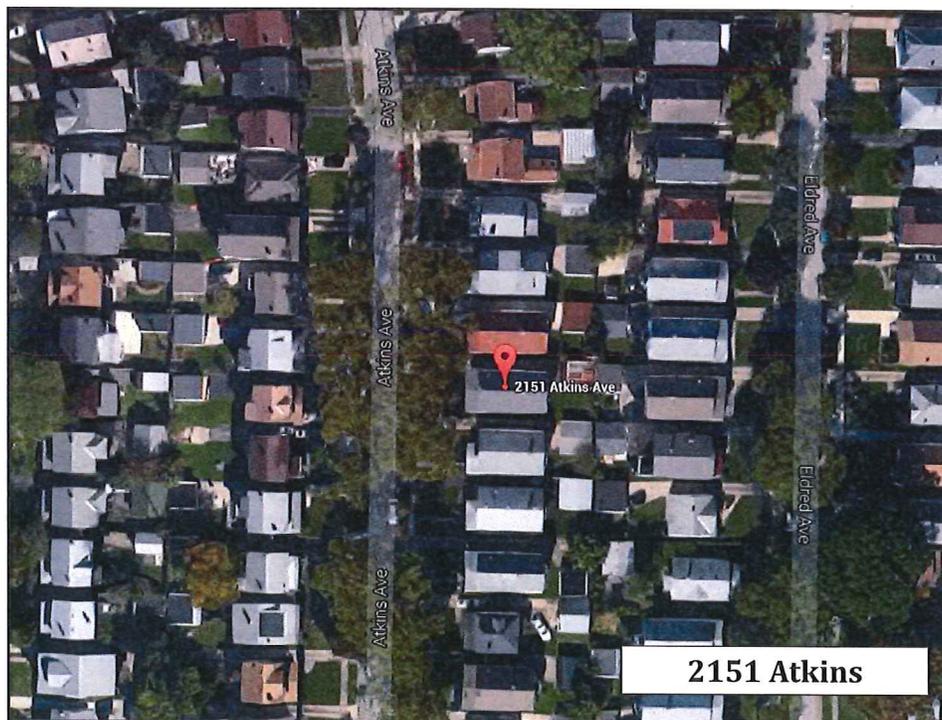
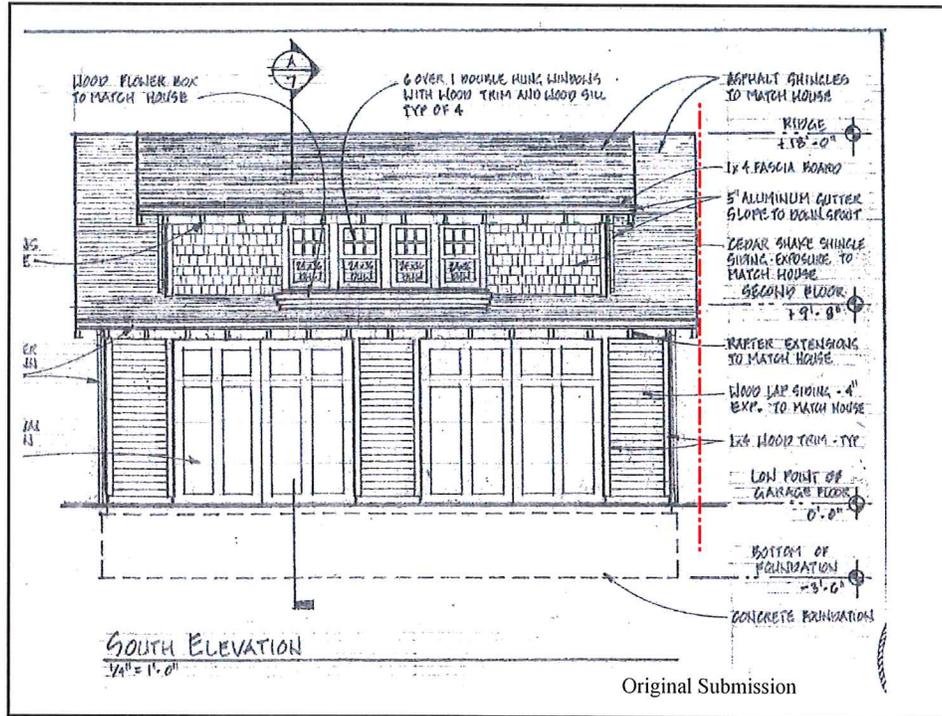


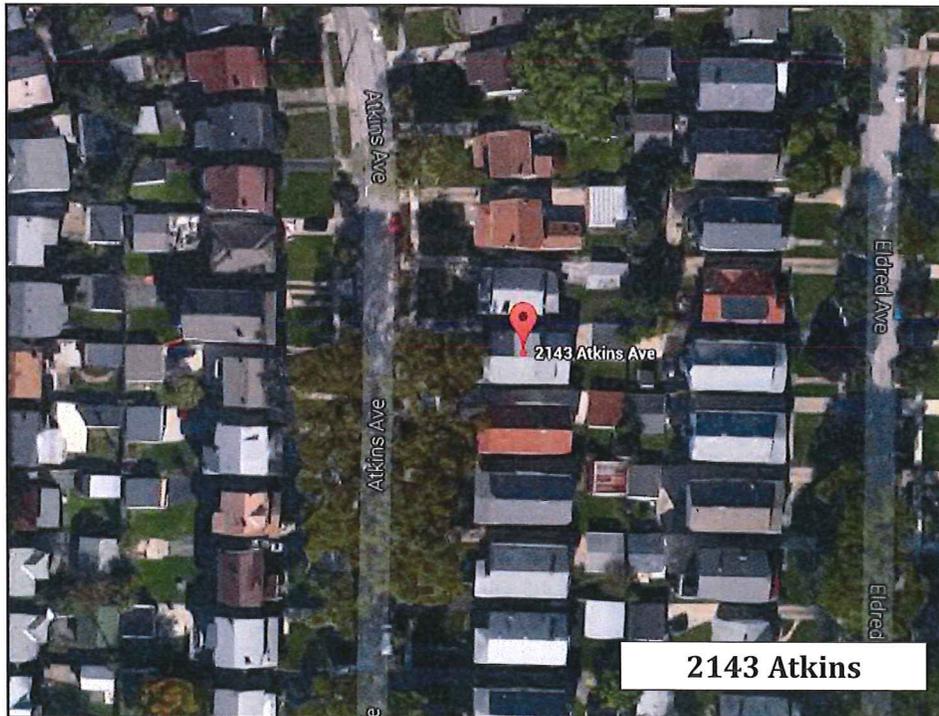










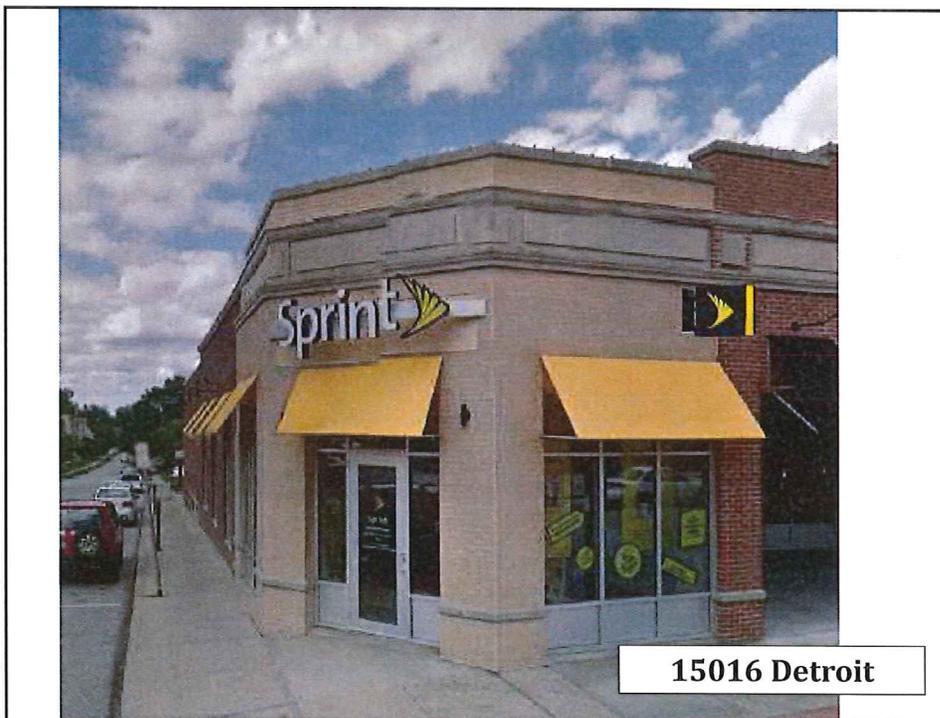




2143 Atkins



15016 Detroit



15016 Detroit

